IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application Nos: 12/046.336 12/717,391 12/906.285 Customer No.: 30678 09/275.276 11/182.809 11/208,882 11/208,883 10/767,265 11/261.762 11/424,610 10/750,949 10/931,079 10/931,191 11/680.684 12/120.787 12/199.024 12/047,408 13/027,009

Revocation and Power of Atterney

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

All previous powers of attorney and authorizations of agent are hereby revoked, and the undersigned hereby appoints the attorneys and agents of Connolly Bove Lodge & Hutz LLP associated with U.S. Patent and Trademark Office ("PTO") Customer Number 30678 to prosecute these applications and any U.S., foreign, or international applications under the Patent Cooperation Treaty based on them and to transact all business in the PTO connected therewith, and to receive all communications from the PTO, including the patent documents. Further details about each application are found in the Appendix to this paper. The authority under this Power of Attorney of each person listed under the aforementioned PTO Customer Number shall

automatically terminate and be revoked upon such person ceasing to be associated with Connolly Bove Lodge & Hutz LLP.

Designation of Correspondence Address

Please associate these applications with PTO Customer Number 30678 and send all notices, official letters, documents, communications, and other correspondence regarding these applications to the address:

Connolly Bove Lodge & Hutz LLP 1875 Eye Street NW, Suite 1100 Washington, DC 20006

or to the address currently associated with PTO Customer Number 30678.

Certificate Under 37 C.F.R. § 3.73(b)

Intellectual Ventures I LLC is the assignee of the entire right, title, and interest in these patents and applications by virtue of the chains of assignment shown in the attached Appendix, which are recorded in the records of the PTO. To the best of the undersigned's knowledge and belief, the titles are in the name of said assignee. The undersigned, whose title is supplied below, is empowered to sign this certificate on behalf of Intellectual Ventures I LLC.

Signed: Val VV

Date: 7/11/19

Title: Authorized Person for Intellectual Ventures I LLC

APPENDIX: DETAILS OF LISTED APPLICATIONS

Application No.: 12/046,336 Confirmation No.: 1968 Patent No.: 7,890,899

Filing Date: March 11, 2008

First Named Inventor: Laurence H. Cooke Title: Variable Clocked Scan Test improvements Attorney Docket No.: 27592-01022-US3

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: July 15, 2005

Recorded: July 18, 2005 at Reel 016790/Frame 0990

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 11/182,809 Confirmation No.: 8379 Patent No.: 7,353,470 Filing Date: July 18, 2005

First Named Inventor: Laurence H. Cooke Title: Variable Clocked Scan Test Improvements Attorney Docket No.: 27592-01022-US2

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: July 15, 2005

Recorded: July 18, 2005 at Reel 016790/Frame 0990

 On-Chip Technologies, inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 12/717,391 Confirmation No.: 2688

Patent No.: TBD

Filing Date: March 4, 2010

First Named Inventor: Bulent Dervisoglu

Title: On-Chip Service Processor

Attorney Docket No.: 27592-01021-US6

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: January 29, 2004

Recorded: January 30, 2004 at Reel 014948/Frame 0318

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 11/424,610 Confirmation No.: 4038 Patent No.: 7,836,371

Patent No.: 7,830,371 Filing Date: June 16, 2006

First Named Inventor: Bulent Dervisoglu

Title: On-Chip Service Processor Attorney Docket No.: 27592-01021-US6

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: January 29, 2004

Recorded: January 30, 2004 at Reel 014948/Frame 0318

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

 OC Applications Research LLC to Intellectual Ventures I LLC Executed: December 7, 2010

Application No.: 11/261.762 Confirmation No.: 8919 Patent No.: 7.080.301

Filing Date: October 31, 2005

First Named Inventor: Bulent Dervisoglu

Title: On-Chip Service Processor Attorney Docket No.: 27592-01021-US4

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: January 29, 2004

Recorded: January 30, 2004 at Reel 014948/Frame 0318

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 10/767,265 Confirmation No.: 4852 Patent No.: 6,964,001 Filing Date: January 30, 2004

First Named Inventor: Bulent Dervisoglu

Title: On-Chip Service Processor Attorney Docket No.: 27592-01021-US3

Chain of Title:

1) Inventors to On-Chip Technologies, Inc.

Executed: January 29, 2004

Recorded: January 30, 2004 at Reel 014948/Frame 0318

2) On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures LLC

Executed: December 7, 2010

Application No.: 09/275,726 Confirmation No.: 1134 Patent No.: 6.687.865

Filing Date: March 24, 1999

First Named Inventor: Bulent Dervisoglu-

Title: On-Chip Service Processor for Test and Debug of Integrated Circuits

Attorney Docket No.: 27592-01021-US2 Chain of Title:

1) Inventors to On-Chip Technologies, Inc. Executed: July 19, 1999 and July 24, 1999

Recorded: August 2, 1999 at Reel 010135/Frame 0168

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 13/027,009 Confirmation No.: 5965 Patent No.: TRD

Filing Date: February 14, 2011

First Named Inventor: Bulent Dervisoglu Title: On-Chip Service Processor

Attorney Docket No.: 27592-01021-US7

Chain of Title:

1) Inventors to On-Chip Technologies, Inc. Executed: January 29, 2004

Recorded: January 30, 2004 at Reel 014948/Frame 0318

2) On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: February 14, 2011 at Reel 025805/Frame 0816

3) OC Applications Research LLC to Intellectual Ventures I LLC Executed: December 7, 2010

Recorded: February 14, 2011 at Reel 025805/Frame 0853

Application No.: 11/208,882 Confirmation No.: 9831 Patent No.: 7,421,563

Filing Date: August 23, 2005

First Named Inventor: Laurence H. Cooke Title: Hashing and Serial Decoding Techniques Attorney Docket No.: 27592-01024-US1

Chain of Title:

1) Inventor to On-Chip Technologies, Inc.

Executed: August 22, 2005

Recorded: August 23, 2005 at Reel 016915/Frame 0403

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

 OC Applications Research LLC to Intellectual Ventures I LLC Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 12/199,024 Confirmation No.: 5184 Patent No.: 7,818,538

Filing Date: August 27, 2008

First Named Inventor: Laurence H. Cooke Title: Hashing and Serial Decoding Techniques Attorney Docket No.: 27592-01024-US2

Chain of Title:

Inventor to On-Chip Technologies, Inc.
Executed: August 22, 2005

Recorded: August 23, 2005 at Reel 016915/Frame 0403

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008
Recorded: April 4, 2008 at Recl 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 12/906,285 Confirmation No.: 9794

Patent No.: TBD

Filing Date: October 18, 2010

First Named Inventor: Laurence H. Cooke Title: Hashing and Serial Decoding Techniques Attorney Docket No.: 27592-01024-US3

Chain of Title:

1) Inventor to On-Chip Technologies, Inc.

Executed: August 22, 2005

Recorded: August 23, 2005 at Reel 016915/Frame 0403

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: January 5, 2011 at Reel 025583/Frame 0802

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 11/208,883 Confirmation No.: 9834 Patent No.: 7,421,636

Filing Date: August 23, 2005

First Named Inventor: Laurence H. Cooke

Title: Scan String Segmentation for Digital Test Compression

Attorney Docket No.: 27592-01025-US1 Chain of Title:

Inventor to On-Chip Technologies, Inc.
Executed: August 22, 2005

Recorded: August 23, 2005 at Reel 016915/Frame 0359

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 12/120,787 Confirmation No.: 5660 Patent No.: 7,620,865 Filing Date: May 15, 2008

First Named Inventor: Laurence H. Cooke

Title: Scan String Segmentation for Digital Test Compression

Attorney Docket No.: 27592-01025-US2

Chain of Title:

1) Inventor to On-Chip Technologies, Inc.

Executed: August 22, 2005

Recorded: August 23, 2005 at Reel 016915/Frame 0359

2) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: January 5, 2011 at Reel 025583/Frame 0802

3) OC Applications Research LLC to Intellectual Ventures LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 10/750,949 Confirmation No.: 2063 Patent No.: 7,197,681 Filing Date: January 5, 2004

First Named Inventor: Bulent Dervisordu

Title: Accelerated Scan Circuitry and Method for Reducing Test Data Volume and Execution

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Attorney Docket No.: 27592-01020-US3

Chain of Title:

1) Inventor (Laurence H. Cooke) to On-Chip Technologies, Inc.

Executed: April 15, 2003

Recorded: May 9, 2003 at Reel 014056/Frame 0571

2) Inventors to On-Chip Technologies, Inc.

Executed: December 18, 2003

Recorded: January 5, 2004 at Reel 014872/Frame 0001

3) On-Chip Technologies, Inc. to OC Applications Research LLC

Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

4) OC Applications Research LLC to intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 10/931,079 Confirmation No.: 9004

Patent No.: 7,188,286

Flling Date: September 1, 2004

First Named Inventor: Bulent Dervisoglu

Title: Accelerated Scan Circuitry and Method for Reducing Test Data Volume and Execution

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Attorney Docket No.: 27592-01020-US4

Chain of Title:

1) Inventor (Laurence H. Cooke) to On-Chip Technologies, Inc.

Executed: April 15, 2003

Recorded: May 9, 2003 at Reel 014056/Frame 0571

2) Inventors to On-Chip Technologies, Inc.

Executed: December 18, 2003

Recorded: January 5, 2004 at Reel 014872/Frame 0001

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

4) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 10/931,191 Confirmation No.: 1641 Patent No.: 7.200,784

Filing Date: September 1, 2004

First Named Inventor: Bulent Dervisoglu

Title: Accelerated Scan Circuitry and Method for Reducing Test Data Volume and Execution

Time

Attorney Docket No.: 27592-01020-US5

Chain of Title:

 Inventor (Laurence H. Cooke) to On-Chip Technologies, Inc. Executed: April 15, 2003

Recorded: May 9, 2003 at Reel 014056/Frame 0571

 Inventors to On-Chip Technologies, Inc. Executed: December 18, 2003

Recorded: January 5, 2004 at Reel 014872/Frame 0001

 On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

4) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Application No.: 11/680,684 Confirmation No.: 5701 Patent No.: 7,752,515

Filing Date: March 1, 2007

First Named Inventor: Bulent Dervisoglu-

Title: Accelerated Scan Circuitry and Method for Reducing Test Data Volume and Execution

Time

Attorney Docket No.: 27592-01020-US6

Chain of Title:

1) Inventor (Laurence H. Cooke) to On-Chip Technologies, Inc.

Executed: April 15, 2003.

Recorded: May 9, 2003 at Reel 014056/Frame 0571

2) Inventors to On-Chip Technologies, Inc.

Executed: December 18, 2003.

Recorded: January 5, 2004 at Reel 014872/Frame 0001

3) On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Recl 020753/Frame 0337

4) OC Applications Research LLC to Intellectual Ventures I LLC

Executed: December 7, 2010

Recorded: December 7, 2010 at Reel 025467/Frame 0063

Application No.: 12/047,408 Confirmation No.: 2972 Patent No.: RE41,187 Filing Date: March 13, 2008

First Named Inventor: Laurence H. Cooke Title: Accelerated Scan Circuitry and Method Attorney Docket No.: 27592-01020-US7

Chain of Title:

1) Inventor to On-Chip Technologies, Inc.

Executed: April 15, 2003

Recorded: May 9, 2003 at Reel 014056/Frame 0571

2) On-Chip Technologies, Inc. to OC Applications Research LLC Executed: March 13, 2008

Recorded: April 4, 2008 at Reel 020753/Frame 0337

3) OC Applications Research LLC to Intellectual Ventures I LLC Executed: December 7, 2010 Recorded: December 7, 2010 at Real 025467/Frame 0063.

DECLARATION REGARDING AUTHORITY TO SIGN ON BEHALF OF A LEGAL ENTITY 37 C.F.R, 3,73(b)(2)(ii)

I, David Dutcher (whose title is supplied below), hereby declare that I am authorized to sign the Revocation and Power of Attorney on behalf of Intellectual Ventures I LLC.

David Dutcher

Authorized Person for Intellectual Ventures I LLC

7/11/11 Date